Search Report
EIC 1700

STIC Database Tracking Number: 240339

To:	From:
To: MICHAEL BERNSHTEYN **Location: REM-10D25** **Art Unit: 1796** **Tuesday, October 16, 2007** **Case Serial Number: 10/554242**	**From: MEI HUANG** **Location: EIC1700** **REM-4B28 / REM-4B31** **Phone: (571)272-3952** **mei.huang@uspto.gov**

Search Notes

Examiner BERNSHTEYN:

Please feel free to contact me if you have any questions or if you would like to refine the search query. Thank you for using STIC services!

Regards,
Mei

Please search this as soon as possible. Le Chen

RUSH

Access DB# 240339

SEARCH REQUEST FORM

Scientific and Technical Information Center

Requester's Full Name: Michael Bernshteyn Examiner # : 81515 Date: 10/16/07
Art Unit: 1796 Phone Number 30 272-2411 Serial Number: 10/554,242
Mail Box and Bldg/Room Location: Rm 10D25 Results Format Preferred (circle): PAPER DISK E-MAIL

If more than one search is submitted, please prioritize searches in order of need.

****

Please provide a detailed statement of the search topic, and describe as specifically as possible the subject matter to be searched. Include the elected species or structures, keywords, synonyms, acronyms, and registry numbers, and combine with the concept or utility of the invention. Define any terms that may have a special meaning. Give examples or relevant citations, authors, etc, if known. Please attach a copy of the cover sheet, pertinent claims, and abstract.

Title of Invention: Process for production of living-radical polymers

Inventors (please provide full names): Shigeru Yamago; Junichi Yoshida, Takashi Kameshima

Earliest Priority Filing Date: 04/25/2002

**For Sequence Searches Only* Please include all pertinent information (parent, child, divisional, or issued patent numbers) along with the appropriate serial number.*

Please, try to find a polymer initiator according claims 1-3, comprising an organotellurium compound of formula (1), ditelluride of formula (2) and azo initiator.

Thank you

M. Bernshteyn

****

STAFF USE ONLY	Type of Search		Vendors and cost where applicable	
Searcher: MH	NA Sequence (#)		STN	✓
Searcher Phone #:	AA Sequence (#)		Dialog	
Searcher Location:	Structure (#)	3	Questel/Orbit	
Date Searcher Picked Up:	Bibliographic		Dr.Link	
Date Completed: 10/16/07	Litigation		Lexis/Nexis	
Searcher Prep & Review Time:	Fulltext		Sequence Systems	
Clerical Prep Time:	Patent Family		WWW/Internet	
Online Time:	Other		Other (specify)	

PTO-1590 (8-01)

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Bib Data Sheet

CONFIRMATION NO. 6569

SERIAL NUMBER	FILING OR 371(c) DATE	CLASS	GROUP ART UNIT	ATTORNEY DOCKET NO.
10/554,242	10/25/2005 RULE	526	1713	2005-1665A

APPLICANTS

Shigeru Yamago, Ichijoji-sagarimatsu cho, JAPAN;
Junichi Yoshida, Higashikorimotomachi, JAPAN;
Takashi Kameshima, Kagasuno, JAPAN;

**** CONTINUING DATA ***************************

This application is a 371 of PCT/JP04/05989 04/26/2004

**** FOREIGN APPLICATIONS *********************

JAPAN 2003-121223 04/25/2003

IF REQUIRED, FOREIGN FILING LICENSE GRANTED

** 05/30/2006

Foreign Priority claimed	STATE OR COUNTRY	SHEETS DRAWING	TOTAL CLAIMS	INDEPENDENT CLAIMS
☒ yes ☐ no	JAPAN	0	3	3

35 USC 119 (a-d) conditions met: ☒ yes ☐ no ☐ Met after Allowance

Verified and Acknowledged: M. Berrisford MB
Examiner's Signature / Initials

ADDRESS

513

TITLE

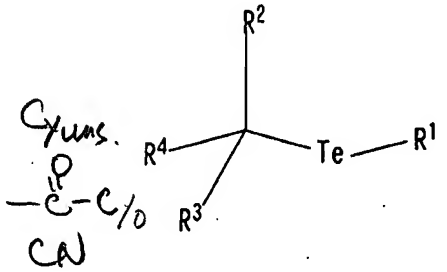
Process for production of living-radical polymers and polymers

FILING FEE RECEIVED	FEES: Authority has been given in Paper
900	No. _____ to charge/credit DEPOSIT ACCOUNT No. _____ for following:

- ☐ All Fees
- ☐ 1.16 Fees (Filing)
- ☐ 1.17 Fees (Processing Ext. of time)
- ☐ 1.18 Fees (Issue)
- ☐ Other _____
- ☐ Credit

Amendments to the Claims

1. (Currently amended) A process for producing a living radical polymer which comprises polymerizing a vinyl monomer in the presence of an organotellurium compound represented by the formula (1), an azo type polymerization initiator and a ditelluride compound represented by the formula (2)



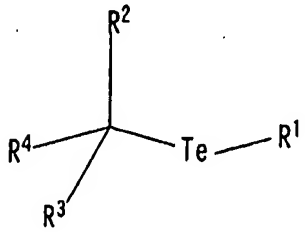
(1)

wherein R^1 is C_1-C_8 alkyl, aryl, substituted aryl or an aromatic heterocyclic group, R^2 and R^3 are each a hydrogen atom or C_1-C_8 alkyl, and R^4 is aryl, substituted aryl, an aromatic heterocyclic group, acyl, oxycarbonyl or cyano,

$(R^1Te)_2$ (2)

wherein R^1 is the same as above, to obtain a living radical polymer having a molecular weight distribution of 1.05 to 1.50.

2. (Currently amended) A living radical polymer having a molecular weight distribution of 1.05 to 1.50 produced by polymerizing a vinyl monomer in the presence of an organotellurium compound represented by the formula (1), an azo type polymerization initiator and a ditelluride compound represented by the formula (2)



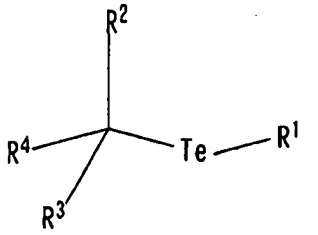
(1)

wherein R^1 is C_1-C_8 alkyl, aryl, substituted aryl or an aromatic heterocyclic group, R^2 and R^3 are each a hydrogen atom or C_1-C_8 alkyl, and R^4 is aryl, substituted aryl, an aromatic heterocyclic group, acyl, oxycarbonyl or cyano,

$(R^1Te)_2$ (2)

wherein R^1 is the same as above.

3. (Previously presented) A mixture of an organotellurium compound represented by the formula (1), an azo type polymerization initiator and a ditelluride compound represented by the formula (2)



(1)

wherein R^1 is C_1-C_8 alkyl, aryl, substituted aryl or an aromatic heterocyclic group, R^2 and R^3 are each a hydrogen atom or C_1-C_8 alkyl, and R^4 is aryl, substituted aryl, an aromatic heterocyclic group, acyl, oxycarbonyl or cyano,

$(R^1Te)_2$ (2)

wherein R^1 is the same as above.

STIC Search Results Feedback Form

EIC17000

Questions about the scope or the results of the search? Contact *the EIC searcher or contact:*

Kathleen Fuller, EIC 1700 Team Leader
571/272-2505 REMSEN 4B28

Voluntary Results Feedback Form

- *I am an examiner in Workgroup:* [ ] *Example: 1713*
- *Relevant prior art* ***found****, search results used as follows:*
  - ☐ 102 rejection
  - ☐ 103 rejection
  - ☐ Cited as being of interest.
  - ☐ Helped examiner better understand the invention.
  - ☐ Helped examiner better understand the state of the art in their technology.

Types of relevant prior art found:

- ☐ Foreign Patent(s)
- ☐ Non-Patent Literature
  (journal articles, conference proceedings, new product announcements etc.)

- *Relevant prior art* ***not found****:*
  - ☐ Results verified the lack of relevant prior art (helped determine patentability).
  - ☐ Results were not useful in determining patentability or understanding the invention.

Comments:

Drop off or send completed forms to EIC1700 REMSEN 4B28

```
=> fil reg
FILE 'REGISTRY' ENTERED AT 15:30:07 ON 16 OCT 2007
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STRUCTURE FILE UPDATES:   15 OCT 2007  HIGHEST RN 950725-14-1
DICTIONARY FILE UPDATES:  15 OCT 2007  HIGHEST RN 950725-14-1

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=> d que stat l13
L4              STR

Te~C
1  2


NODE ATTRIBUTES:
NSPEC   IS RC     AT   2
DEFAULT MLEVEL IS ATOM
DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:
RING(S) ARE ISOLATED OR EMBEDDED
NUMBER OF NODES IS   2

STEREO ATTRIBUTES: NONE
L6              SCR 2040
L8         8193 SEA FILE=REGISTRY SSS FUL L4 NOT L6
L11             STR
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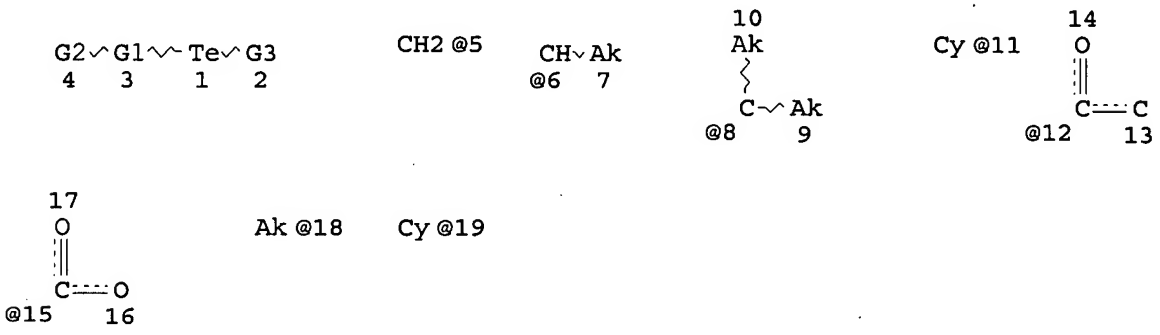


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VAR G3=18/19
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ECOUNT  IS M1-X8 C  AT   9
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ECOUNT  IS M1-X8 C  AT  18

GRAPH ATTRIBUTES:
RING(S) ARE ISOLATED OR EMBEDDED
NUMBER OF NODES IS  19

STEREO ATTRIBUTES: NONE
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100.0% PROCESSED    8193 ITERATIONS                      244 ANSWERS
SEARCH TIME: 00.00.01



=> d que stat l16
L4              STR

Te~^C
 1   2

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DEFAULT MLEVEL IS ATOM
DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:
RING(S) ARE ISOLATED OR EMBEDDED
NUMBER OF NODES IS   2

STEREO ATTRIBUTES: NONE
L6              SCR 2040
L8          8193 SEA FILE=REGISTRY SSS FUL L4 NOT L6
L10             STR

G1^Te~~Te^G1        Ak@5     Cy@6
 4   3    1   2

VAR G1=5/6
NODE ATTRIBUTES:
DEFAULT MLEVEL IS ATOM
GGCAT   IS SAT  AT   5
GGCAT   IS UNS  AT   6
DEFAULT ECLEVEL IS LIMITED
ECOUNT  IS M1-X8 C  AT   5

GRAPH ATTRIBUTES:
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RING(S) ARE ISOLATED OR EMBEDDED
NUMBER OF NODES IS   6

STEREO ATTRIBUTES: NONE
L16          445 SEA FILE=REGISTRY SUB=L8 SSS FUL L10

100.0% PROCESSED     736 ITERATIONS                          445 ANSWERS
SEARCH TIME: 00.00.01


=> d his

     (FILE 'HOME' ENTERED AT 14:48:18 ON 16 OCT 2007)

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                E US20060199927/PN
L1            1 S E3
                SEL RN

     FILE 'REGISTRY' ENTERED AT 14:48:53 ON 16 OCT 2007
L2           33 S E1-33
L3            6 S L2 AND TE/ELS

     FILE 'LREGISTRY' ENTERED AT 15:02:03 ON 16 OCT 2007
L4               STR

     FILE 'REGISTRY' ENTERED AT 15:03:33 ON 16 OCT 2007
L5           50 S L4
L6              SCR 2040
L7           50 S L4 NOT L6
L8         8193 S L4 NOT L6 FUL
L9            5 S L2 AND L8
                SAV L8 BER242/A

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L11              STR L4

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L14           3 S L2 AND L13
                SAV L13 BER242S1/A
L15          24 S L10 SSS SAM SUB=L8
L16         445 S L10 SSS FUL SUB=L8
L17           2 S L2 AND L16
                SAV L16 BER242S2/A

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L18         183 S L13
L19        1141 S L16
L20          58 S L18 AND L19
L21          16 S L13(L)CAT/RL
L22          27 S L16(L)CAT/RL
L23           5 S L21 AND L22
L24             QUE CATALYST
L25          14 S L20 AND L24
L26             QUE INITIAT? OR INIT#
L27           7 S L20 AND L26
L28          15 S L25 OR L27
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L29 10 S L28 NOT L23

=> fil hcap
FILE 'HCAPLUS' ENTERED AT 15:30:19 ON 16 OCT 2007

FILE COVERS 1907 - 16 Oct 2007 VOL 147 ISS 17
FILE LAST UPDATED: 15 Oct 2007 (20071015/ED)

New CAS Information Use Policies, enter HELP USAGETERMS for details.

This file contains CAS Registry Numbers for easy and accurate substance identification.

=> d l23 ibib abs hitstr hitind 1-5

L23 ANSWER 1 OF 5 HCAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 2006:888365 HCAPLUS
DOCUMENT NUMBER: 145:272431
TITLE: Manufacture of aqueous polymer solutions using organotellurium compounds
INVENTOR(S): Okubo, Masayoshi; Kameshima, Takashi; Kono, Kazuhiro; Makoto, Takeshi
PATENT ASSIGNEE(S): Kobe University, Japan; Otsuka Chemical Co., Ltd.
SOURCE: Jpn. Kokai Tokkyo Koho, 17pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

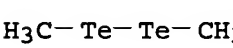
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2006225524	A	20060831	JP 2005-41321	200502 17
PRIORITY APPLN. INFO.:			JP 2005-41321	200502 17

OTHER SOURCE(S): MARPAT 145:272431
AB Vinyl monomers are polymerized in aqueous media by using R1TeCR2R3R4 [R1 = C1-8 alkyl, (un)substituted aryl, aromatic heterocyclic group; R2, R3 =

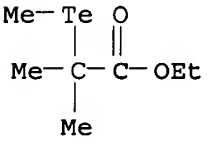
H, C1-8 alkyl; R4 = (un)substituted aryl, aromatic heterocyclic group, acyl, oxycarbonyl, cyano] and surfactants and/or dispersing agents to give the aqueous solns. The aqueous solns. are used as macroinitiators in polymerization of vinyl monomers. Thus, Me methacrylate was polymerized at 60° for 24 h in H2O in the presence of ethyl-2-methyl-2-butyltellanyl propionate, di-Bu ditelluride, AIBN, and Na dodecylsulfonate to give an aqueous PMMA emulsion with conversion 77%, Mn 20,900 and Mw/Mn 1.36.

IT **20334-43-4P**, Dimethyl ditelluride **474094-06-9P** **658058-35-6P**
RL: **CAT (Catalyst use)**; IMF (Industrial manufacture); PREP (Preparation); USES (Uses)
(manufacture of aqueous polymer solns. using organotellurium compds.)

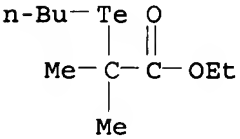
RN 20334-43-4 HCAPLUS
CN Ditelluride, dimethyl (9CI) (CA INDEX NAME)



RN 474094-06-9 HCAPLUS
CN Propanoic acid, 2-methyl-2-(methyltelluro)-, ethyl ester (CA INDEX NAME)



RN 658058-35-6 HCAPLUS
CN Propanoic acid, 2-(butyltelluro)-2-methyl-, ethyl ester (CA INDEX NAME)



CC 37-3 (Plastics Manufacture and Processing)

IT **20334-43-4P**, Dimethyl ditelluride **474094-06-9P** **658058-35-6P**
RL: **CAT (Catalyst use)**; IMF (Industrial manufacture); PREP (Preparation); USES (Uses)
(manufacture of aqueous polymer solns. using organotellurium compds.)

L23 ANSWER 2 OF 5 HCAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 2005:428591 HCAPLUS
DOCUMENT NUMBER: 142:454333
TITLE: Radiation-sensitive chemically amplified positive-working resists
INVENTOR(S): Nishimura, Isao; Kobayashi, Eiichi; Seyano, Akimasa; Wang, Yong
PATENT ASSIGNEE(S): JSR Ltd., Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 44 pp.

CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2005128049	A	20050519	JP 2003-360291	200310 21

PRIORITY APPLN. INFO.: JP 2003-360291 200310 21

OTHER SOURCE(S): MARPAT 142:454333

AB The resists comprise alkali-insol. polymers having acid-labile groups increasing solubility in alkaline solns. upon contact with acids, and radiation-sensitive acid generators, wherein the polymers are prepared by using RbC(Rc)(Rd)TeRa [Ra = C1-8 alkyl, (substituted) aryl, atom. heterocycle; Rb, Rc = H, C1-8 alkyl; Rd = (substituted) aryl, aromatic heterocycle, acyl, etc.], and optionally ditellurides (RaTe)2 as radical living polymerization initiators. In the polymerization, radical polymerization initiators may also be employed. The polymers has narrow mol.-weight distribution peaks with small lot-to-lot fluctuation and resultant resists show high transparency and sensitivity for far UV, x rays, and electron rays, and high dry etching resistance, and provide fine patterns with good profile.

IT **20334-43-4P**, Dimethyl ditelluride **77129-69-2P**, Di(butyl) ditelluride **474094-06-9P 658058-35-6P**
RL: **CAT (Catalyst use)**; IMF (Industrial manufacture); PREP (Preparation); USES (Uses)
(radical living polymerization initiator, for preparing polymer; radiation-sensitive pos.-working resist containing polymer prepared by using radical living polymerization)

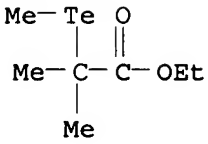
RN 20334-43-4 HCAPLUS
CN Ditelluride, dimethyl (9CI) (CA INDEX NAME)

$H_3C-Te-Te-CH_3$

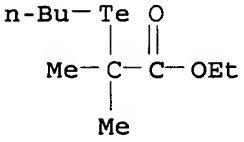
RN 77129-69-2 HCAPLUS
CN Ditelluride, dibutyl (CA INDEX NAME)

n-Bu—Te—Te—Bu-n

RN 474094-06-9 HCAPLUS
CN Propanoic acid, 2-methyl-2-(methyltelluro)-, ethyl ester (CA INDEX NAME)



RN 658058-35-6 HCAPLUS
CN Propanoic acid, 2-(butyltelluro)-2-methyl-, ethyl ester (CA INDEX NAME)



IC ICM G03F007-039
ICS C08F004-72; H01L021-027; C08F020-00
CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)
Section cross-reference(s): 35, 38
IT **20334-43-4P**, Dimethyl ditelluride **77129-69-2P**, Di(butyl) ditelluride **474094-06-9P 658058-35-6P**
RL: **CAT (Catalyst use)**; IMF (Industrial manufacture); PREP (Preparation); USES (Uses)
(radical living polymerization initiator, for preparing polymer; radiation-sensitive pos.-working resist containing polymer prepared by using radical living polymerization)

L23 ANSWER 3 OF 5 HCAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 2005:428239 HCAPLUS
DOCUMENT NUMBER: 142:464450
TITLE: Acid-dissociating group-containing acrylic polymers with narrow molecular weight distribution and their manufacture
INVENTOR(S): Nishimura, Isao; Wang, Yong; Kameshima, Takashi
PATENT ASSIGNEE(S): JSR Ltd., Japan; Otsuka Chemical Co., Ltd.
SOURCE: Jpn. Kokai Tokkyo Koho, 37 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2005126459	A	20050519	JP 2003-360290	200310 21
PRIORITY APPLN. INFO.:			JP 2003-360290	200310 21

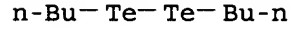
OTHER SOURCE(S): MARPAT 142:464450
AB The polymers, especially useful for lithog., are manufactured in the presence

(1) R1TeCR2R3R4 [I; R1 = C1-8 alkyl, (un)substituted aryl, aromatic heterocyclic; R2,3 = H, C1-8 alkyl; R4 = (un)substituted aryl, aromatic heterocyclic, acyl, oxycarbonyl, cyano] or (2) mixts. of ≥1 compds. selected from I, radical polymerization initiators, and (R5Te)2 (R5 = same as R1). Thus, 3.5 mmol 2-methyl-2-propenoic acid hexahydro-2-oxo-3,5-methano-2H-cyclopenta[b]furan-6-yl ester, 1.5 mmol 2-methyl-2-propenoic acid 3-hydroxytricyclo[3.3.1.13,7]dec-1-yl ester, and 5 mmol 2-methyl-2-propenoic acid 2-methyltricyclo[3.3.1.13,7]dec-2-yl ester were polymerized in the presence of Et 2-methyl-2-(butyltelluro)propanoate (0.2 mmol), dibutylditelluride (0.10 mmol), and MAIB (0.10 mmol) to give a copolymer (yield 85%) showing Mw 10000, Mw/Mn 1.24, good solubility to propylene glycol monomethyl ether acetate, and decreased Mw fluctuation.

IT **20334-43-4P**, Dimethylditelluride **77129-69-2P**, Dibutylditelluride **474094-06-9P 658058-35-6P**
RL: **CAT (Catalyst use)**; IMF (Industrial manufacture); PREP (Preparation); USES (Uses)
(living polymerization initiator; acid-dissociating group-containing acrylic polymers with narrow mol. weight distribution)

RN 20334-43-4 HCAPLUS
CN Ditelluride, dimethyl (9CI) (CA INDEX NAME)

RN 77129-69-2 HCAPLUS
CN Ditelluride, dibutyl (CA INDEX NAME)



RN 474094-06-9 HCAPLUS
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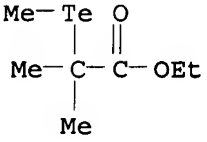
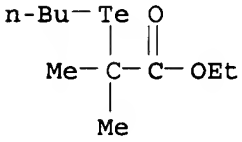


RN 658058-35-6 HCAPLUS
CN Propanoic acid, 2-(butyltelluro)-2-methyl-, ethyl ester (CA INDEX NAME)



IC ICM C08F004-00
ICS C08F020-10; G03F007-033; G03F007-039; C07C395-00

CC 37-3 (Plastics Manufacture and Processing)
Section cross-reference(s): 74
IT **20334-43-4P**, Dimethylditelluride **77129-69-2P**,
Dibutylditelluride **474094-06-9P 658058-35-6P**
RL: **CAT (Catalyst use)**; IMF (Industrial manufacture); PREP (Preparation); USES (Uses)
(living polymerization initiator; acid-dissociating group-containing acrylic polymers with narrow mol. weight distribution)

L23 ANSWER 4 OF 5 HCAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 2004:965297 HCAPLUS
DOCUMENT NUMBER: 141:411400
TITLE: Process for production of living-radical polymers and polymers
INVENTOR(S): Yamago, Shigeru; Yoshida, Junichi; Kameshima, Takashi
PATENT ASSIGNEE(S): Otsuka Chemical Co., Ltd., Japan
SOURCE: PCT Int. Appl., 51 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2004096870	A1	20041111	WO 2004-JP5989	200404 26
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW				
RW: BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
EP 1619211	A1	20060125	EP 2004-729496	200404 26
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, PL, SK, HR				
CN 1780860	A	20060531	CN 2004-80011197	200404 26
JP 3845109	B2	20061115	JP 2005-505899	200404 26
US 2006199927	A1	20060907	US 2005-554242	200510 25
PRIORITY APPLN. INFO.:			JP 2003-121223 A	200304 25

WO 2004-JP5989 W
200404
26

OTHER SOURCE(S): MARPAT 141:411400

AB The polymers are prepared by polymerizing vinyl monomers by using an azo initiator, an organotellurium compound R1TeCR2R3R4 and a ditelluride compound (R1Te)2 [R1 = C1-8 alkyl, (un)substituted aryl, aromatic heterocyclic group; R2, R3 = H, C1-8 alkyl; R4 = (un)substituted aryl, aromatic heterocyclic group, acyl, oxycarbonyl, cyano]. Thus, 10 mmol Me methacrylate was polymerized in the presence of AIBN 0.10, dimethylditelluride 0.10, and 2-methyl-2-methyltellurylpropionitrile 0.10 mmol at 60° for 2 h to give 98% PMMA with Mn 9600 and Mw/Mn 1.15.

IT **20334-43-4P**, Dimethylditelluride **77129-69-2P**, Dibutylditelluride **474094-06-9P 582319-76-4P 658058-35-6P**
RL: **CAT (Catalyst use)**; IMF (Industrial manufacture); PREP (Preparation); USES (Uses)
(organotellurium catalysts for preparation of living-radical polymers)

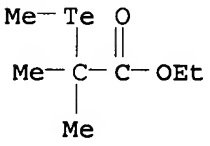
RN 20334-43-4 HCAPLUS
CN Ditelluride, dimethyl (9CI) (CA INDEX NAME)

$H_3C-Te-Te-CH_3$

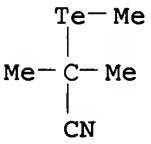
RN 77129-69-2 HCAPLUS
CN Ditelluride, dibutyl (CA INDEX NAME)

n-Bu—Te—Te—Bu-n

RN 474094-06-9 HCAPLUS
CN Propanoic acid, 2-methyl-2-(methyltelluro)-, ethyl ester (CA INDEX NAME)

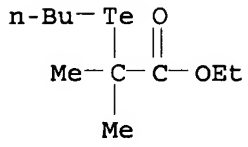


RN 582319-76-4 HCAPLUS
CN Propanenitrile, 2-methyl-2-(methyltelluro)- (CA INDEX NAME)



RN 658058-35-6 HCAPLUS
CN Propanoic acid, 2-(butyltelluro)-2-methyl-, ethyl ester (CA INDEX

NAME)



IC ICM C08F004-00
CC 35-3 (Chemistry of Synthetic High Polymers)
Section cross-reference(s): 29, 67
IT **20334-43-4P**, Dimethylditelluride **77129-69-2P**,
Dibutylditelluride **474094-06-9P 582319-76-4P**
658058-35-6P
RL: **CAT (Catalyst use)**; IMF (Industrial manufacture); PREP
(Preparation); USES (Uses)
(organotellurium catalysts for preparation of living-radical polymers)
REFERENCE COUNT: 3 THERE ARE 3 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L23 ANSWER 5 OF 5 HCAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 2004:143194 HCAPLUS
DOCUMENT NUMBER: 140:181982
TITLE: Process for production of living radical polymers and block polymers
INVENTOR(S): Yamago, Shigeru; Yoshida, Junichi
PATENT ASSIGNEE(S): Otsuka Chemical Co., Ltd., Japan
SOURCE: PCT Int. Appl., 51 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2004014962	A1	20040219	WO 2003-JP10116	20030808
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW				
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
CA 2494983	A1	20040219	CA 2003-2494983	20030808
AU 2003254890	A1	20040225	AU 2003-254890	200308

				08
AU 2003254890	B2	20070823		
EP 1541592	A1	20050615	EP 2003-784600	200308 08
EP 1541592	B1	20070502		
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, SK				
CN 1675253	A	20050928	CN 2003-819158	200308 08
RU 2285010	C2	20061010	RU 2005-106221	200308 08
JP 3839829	B2	20061101	JP 2004-527371	200308 08
AT 361322	T	20070515	AT 2003-784600	200308 08
CN 101029117	A	20070905	CN 2007-10084346	200308 08
US 2006167199	A1	20060727	US 2005-523611	200502 07
JP 2006299278	A	20061102	JP 2006-172603	200606 22
IN 2007DN06928	A	20070928	IN 2007-DN6928	200709 07
PRIORITY APPLN. INFO.:			JP 2002-231917 A	200208 08
			CN 2003-819158 A3	200308 08
			JP 2004-527371 A3	200308 08
			WO 2003-JP10116 W	200308 08
			IN 2005-DN556 A3	200502 14

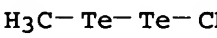
OTHER SOURCE(S): MARPAT 140:181982

AB Vinyl monomers (e.g., MMA, styrene) are polymerized by using living radical polymerization initiators R1TeCR2R3R4 and (R1Te)2 [R1 = C1-8 alkyl, (un)substituted aryl, aromatic heterocyclic group; R2, R3 = H, C1-8 alkyl; R4 = (un)substituted aryl, aromatic heterocyclic group, acyl, oxycarbonyl, cyano]. The initiators enable precise control of mol. weight and mol.-weight distribution under mild conditions. Thus, poly(Me

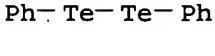
methacrylate) (Mn 9000, Mw/Mn 1.18) was prepared by using (1-methyltelluranylethyl)benzene and di-Me ditelluride as initiators.

IT **20334-43-4P**, Dimethyl ditelluride **32294-60-3P**, Diphenyl ditelluride **77129-69-2P**, Dibutyl ditelluride **415679-75-3P 474094-06-9P 658058-30-1P 658058-31-2P 658058-32-3P 658058-33-4P 658058-34-5P 658058-35-6P**
RL: **CAT (Catalyst use)**; IMF (Industrial manufacture); PREP (Preparation); USES (Uses)
(organotellurium compds. as living radical polymerization catalysts for preparation of polymers and block polymers)

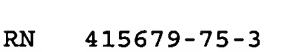
RN 20334-43-4 HCAPLUS
CN Ditelluride, dimethyl (9CI) (CA INDEX NAME)



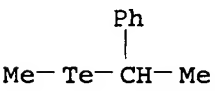
RN 32294-60-3 HCAPLUS
CN Ditelluride, diphenyl (CA INDEX NAME)



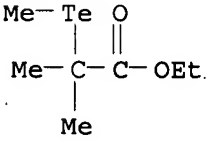
RN 77129-69-2 HCAPLUS
CN Ditelluride, dibutyl (CA INDEX NAME)



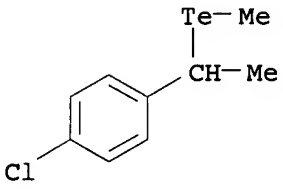
RN 415679-75-3 HCAPLUS
CN Benzene, [1-(methyltelluro)ethyl]- (CA INDEX NAME)



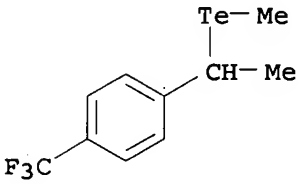
RN 474094-06-9 HCAPLUS
CN Propanoic acid, 2-methyl-2-(methyltelluro)-, ethyl ester (CA INDEX NAME)



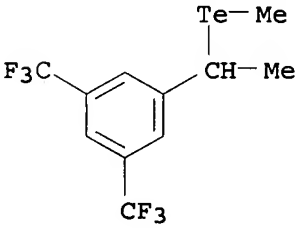
RN 658058-30-1 HCAPLUS
CN Benzene, 1-chloro-4-[1-(methyltelluro)ethyl]- (CA INDEX NAME)



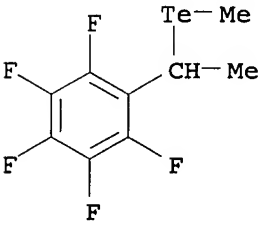
RN 658058-31-2 HCAPLUS
CN Benzene, 1-[1-(methyltelluro)ethyl]-4-(trifluoromethyl)- (CA INDEX NAME)



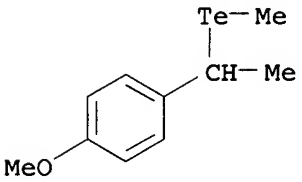
RN 658058-32-3 HCAPLUS
CN Benzene, 1-[1-(methyltelluro)ethyl]-3,5-bis(trifluoromethyl)- (CA INDEX NAME)



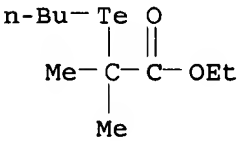
RN 658058-33-4 HCAPLUS
CN Benzene, pentafluoro[1-(methyltelluro)ethyl]- (9CI) (CA INDEX NAME)



RN 658058-34-5 HCAPLUS
CN Benzene, 1-methoxy-4-[1-(methyltelluro)ethyl]- (CA INDEX NAME)



RN 658058-35-6 HCAPLUS
CN Propanoic acid, 2-(butyltelluro)-2-methyl-, ethyl ester (CA INDEX NAME)



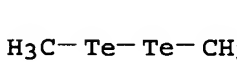
IC ICM C08F004-00
ICS C08F297-00
CC 35-3 (Chemistry of Synthetic High Polymers)
Section cross-reference(s): 29, 67
IT **20334-43-4P**, Dimethyl ditelluride **32294-60-3P**, Diphenyl ditelluride **77129-69-2P**, Dibutyl ditelluride **415679-75-3P 474094-06-9P 658058-30-1P 658058-31-2P 658058-32-3P 658058-33-4P 658058-34-5P 658058-35-6P**
RL: **CAT (Catalyst use)**; IMF (Industrial manufacture); PREP (Preparation); USES (Uses)
(organotellurium compds. as living radical polymerization catalysts for preparation of polymers and block polymers)
REFERENCE COUNT: 2 THERE ARE 2 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

=> d l29 ibib abs hitstr hitind 1-10

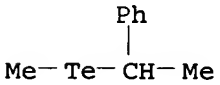
L29 ANSWER 1 OF 10 HCAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 2007:177865 HCAPLUS
DOCUMENT NUMBER: 146:422351
TITLE: Kinetic Study on Role of Ditelluride in Organotellurium-Mediated Living Radical Polymerization (TERP)
AUTHOR(S): Kwak, Yungwan; Tezuka, Miho; Goto, Atsushi; Fukuda, Takeshi; Yamago, Shigeru
CORPORATE SOURCE: Institute for Chemical Research, Kyoto University, Uji, Kyoto, 611-0011, Japan
SOURCE: Macromolecules (Washington, DC, United States) (2007), 40(6), 1881-1885
CODEN: MAMOBX; ISSN: 0024-9297
PUBLISHER: American Chemical Society
DOCUMENT TYPE: Journal
LANGUAGE: English
AB The role of di-Me ditelluride (MeTe)2 for the organotellurium-mediated living radical polymns. (TERPs) of styrene (St) and Me methacrylate (MMA) was kinetically studied. For both St and MMA,

there was a rapid reversible activation-deactivation process mediated by (MeTe)2, i.e., P-TeMe + MeTe• .dblarw. P• + (MeTe)2:(MeTe)2 worked as an efficient deactivator of the propagating radical P•, and the radical MeTe• worked as a highly reactive activator of the dormant species P-TeMe. This rapid reversible process accounted for the dramatic improvement of the polydispersity controllability with the addition of even a small amount of (MeTe)2 for these polymns.

IT **20334-43-4**, Dimethyl ditelluride
RL: CAT (Catalyst use); PEP (Physical, engineering or chemical process); PROC (Process); USES (Uses)
(kinetic study on role of ditelluride in organotellurium-mediated living radical polymerization)
RN 20334-43-4 HCAPLUS
CN Ditelluride, dimethyl (9CI) (CA INDEX NAME)



IT **415679-75-3**
RL: PRP (Properties)
(model compound; kinetic study on role of ditelluride in organotellurium-mediated living radical polymerization)
RN 415679-75-3 HCAPLUS
CN Benzene, [1-(methyltelluro)ethyl]- (CA INDEX NAME)



CC 35-3 (Chemistry of Synthetic High Polymers)
IT Polymerization **catalysts**
Polymerization kinetics
(living, radical; kinetic study on role of ditelluride in organotellurium-mediated living radical polymerization)
IT **20334-43-4**, Dimethyl ditelluride
RL: CAT (Catalyst use); PEP (Physical, engineering or chemical process); PROC (Process); USES (Uses)
(kinetic study on role of ditelluride in organotellurium-mediated living radical polymerization)
IT **415679-75-3**
RL: PRP (Properties)
(model compound; kinetic study on role of ditelluride in organotellurium-mediated living radical polymerization)
REFERENCE COUNT: 41 THERE ARE 41 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L29 ANSWER 2 OF 10 HCAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 2004:986149 HCAPLUS
DOCUMENT NUMBER: 141:411404
TITLE: Manufacture of organotellurium compounds as living radical polymerization **initiators**
INVENTOR(S): Yamako, Shigeru; Yoshida, Junichi; Kameshima, Takashi
PATENT ASSIGNEE(S): Otsuka Chemical Co., Ltd., Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 10 pp.

CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2004323437	A	20041118	JP 2003-121825	200304 25

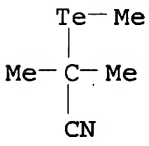
PRIORITY APPLN. INFO.: JP 2003-121825 200304 25

OTHER SOURCE(S): MARPAT 141:411404

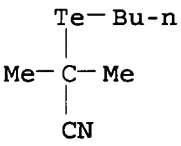
AB The compds. are manufactured by treatment of azo polymerization **initiators** with R1TeTeR2 (R1, R2 = C1-8 alkyl, aryl, heterocyclic group). Thus, AIBN was treated with MeTeTeMe to 17% give 2-methyl-2-methyltellanylpropionitrile.

IT **582319-76-4P 791104-08-0P 791104-09-1P**
RL: CAT (Catalyst use); IMF (Industrial manufacture); PREP (Preparation); USES (Uses)
(manufacture of organotellurium compds. as living radical polymerization **initiators** by treatment of azo polymerization **initiators** with ditellurides)

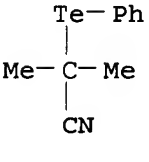
RN 582319-76-4 HCAPLUS
CN Propanenitrile, 2-methyl-2-(methyltelluro)- (CA INDEX NAME)



RN 791104-08-0 HCAPLUS
CN Propanenitrile, 2-(butyltelluro)-2-methyl- (CA INDEX NAME)



RN 791104-09-1 HCAPLUS
CN Propanenitrile, 2-methyl-2-(phenyltelluro)- (CA INDEX NAME)



IT **20334-43-4P**, Dimethyl ditelluride **32294-60-3P**, Diphenyl ditelluride **77129-69-2P**, Dibutyl ditelluride
RL: IMF (Industrial manufacture); RCT (Reactant); PREP (Preparation); RACT (Reactant or reagent)
(manufacture of organotellurium compds. as living radical polymerization **initiators** by treatment of azo polymerization **initiators** with ditellurides)
RN 20334-43-4 HCAPLUS
CN Ditelluride, dimethyl (9CI) (CA INDEX NAME)

$H_3C-Te-Te-CH_3$

RN 32294-60-3 HCAPLUS
CN Ditelluride, diphenyl (CA INDEX NAME)

Ph—Te—Te—Ph

RN 77129-69-2 HCAPLUS
CN Ditelluride, dibutyl (CA INDEX NAME)

n-Bu—Te—Te—Bu-n

IC ICM C07C395-00
ICS C08F004-00
CC 35-3 (Chemistry of Synthetic High Polymers)
Section cross-reference(s): 23, 25
ST organotellurium living radical polymn **initiator** manuf; azo polymn **initiator** ditelluride substitution; AIBN dimethylditelluride substitution; methyl methyltellanyl propionitrile polymn **initiator** manuf
IT Tellurides
RL: RCT (Reactant); RACT (Reactant or reagent)
(ditellurides, dialkyl; manufacture of organotellurium compds. as living radical polymerization **initiators** by treatment of azo polymerization **initiators** with ditellurides)
IT Polymerization **catalysts**
(living, radical; manufacture of organotellurium compds. as living radical polymerization **initiators** by treatment of azo polymerization **initiators** with ditellurides)
IT 109-72-8, Butyllithium, reactions 591-51-5, Phenyllithium 917-54-4
RL: RCT (Reactant); RACT (Reactant or reagent)
(ditelluride manufactured from; manufacture of organotellurium compds. as living radical polymerization **initiators** by treatment of azo polymerization **initiators** with ditellurides)
IT **582319-76-4P 791104-08-0P 791104-09-1P**
RL: CAT (Catalyst use); IMF (Industrial manufacture); PREP (Preparation); USES (Uses)
(manufacture of organotellurium compds. as living radical polymerization **initiators** by treatment of azo polymerization **initiators** with ditellurides)
IT **20334-43-4P**, Dimethyl ditelluride **32294-60-3P**, Diphenyl ditelluride **77129-69-2P**, Dibutyl ditelluride
RL: IMF (Industrial manufacture); RCT (Reactant); PREP

(Preparation); RACT (Reactant or reagent)
(manufacture of organotellurium compds. as living radical polymerization **initiators** by treatment of azo polymerization **initiators** with ditellurides)

IT 78-67-1, AIBN
RL: RCT (Reactant); RACT (Reactant or reagent)
(manufacture of organotellurium compds. as living radical polymerization **initiators** by treatment of azo polymerization **initiators** with ditellurides)

L29 ANSWER 3 OF 10 HCAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 1994:164377 HCAPLUS
DOCUMENT NUMBER: 120:164377
TITLE: Synthesis of α-phenylchalcogeno acetic acids, ethyl-α-phenylchalcogeno acetates and ethyl-α-halo-α-phenylchalcogeno acetates
AUTHOR(S): Dabdoub, Miguel J.; Guerrero, Palimecio G. Jr.; Silveira, Claudio C.
CORPORATE SOURCE: Departamento de Quimica - F.F.C.L., Universidade de Sao Paulo, Av. Bandeirantes, 3900, Ribeirao Preto -SP, Brazil
SOURCE: Journal of Organometallic Chemistry (1993), 460(1), 31-7
CODEN: JORCAI; ISSN: 0022-328X
DOCUMENT TYPE: Journal
LANGUAGE: English
OTHER SOURCE(S): CASREACT 120:164377

AB Reaction of PhTe- or PhSe- anion with BrCH2CO2H under phase-transfer conditions in liquid-solid system affords the α-(phenyltelluro)- and α-(phenylseleno)acetic acid in 44 and 50% yields, resp. Under similar reaction conditions, Ph chalcogenate anions react with BrCH2CO2Et give 52% PhTeCH2CO2Et and 47% PhSeCH2CO2Et, resp. Reaction of PhSeCl with N2CHCO2Et (I) in THF at 0° yields exclusively PhSeCHClCO2Et in 88% yield. Similar reactions by addition of PhSeBr in THF or C6H6 to I at different temps. result in mixts. of PhSeCHBrCO2Et (II) and (PhSe)2CHCO2Et in different ratios. However, when the I was slowly added to a solution of PhSeBr in C6H6 under reflux, II was obtained in 84% yield as the only product. Reaction of I with PhTeBr in C6H6 at room temperature results in formation of PhTeCHBrCO2Et acetate that decomps. rapidly into the corresponding tellurone. Addition of I to a mixture of Ph2Se2 and CuSO4 in refluxing C6H6 results in a 10:1 PhSeCH2CO2Et-(PhSe)2CHCO2Et mixture By an alternative route, the former was obtained in 74% yield by esterification of PhSeCH2CO2H in C6H6 with EtOH-H2SO4, and then transformed into the α-bromo ester in 41% yield by treatment with NBS. On the other hand, the Cu-catalyzed thermal reaction of I with Ph2Te2 in C6H6 afforded PhTeCH2CO2Et as the only product.

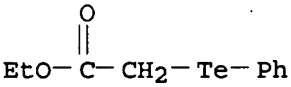
IT **32294-60-3**, Diphenyl ditelluride
RL: RCT (Reactant); RACT (Reactant or reagent)
(condensation reaction of, with bromoacetic acid, phase transfer-catalyzed)

RN 32294-60-3 HCAPLUS
CN Ditelluride, diphenyl (CA INDEX NAME)

Ph—Te—Te—Ph

IT **116246-83-4P 127291-78-5P**

RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation of)
RN 116246-83-4 HCAPLUS
CN Acetic acid, (phenyltelluro)-, ethyl ester (9CI) (CA INDEX NAME)

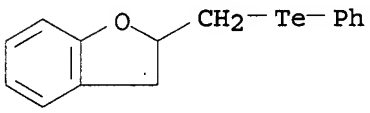


RN 127291-78-5 HCAPLUS
CN Acetic acid, (phenyltelluro)- (9CI) (CA INDEX NAME)

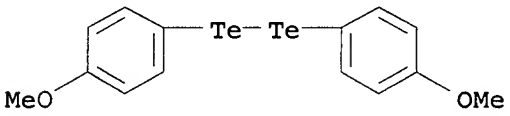
CC 29-8 (Organometallic and Organometalloidal Compounds)
IT 112-02-7, Cetyltrimethylammonium chloride
RL: CAT (Catalyst use); USES (Uses)
(**catalyst**, for phase transfer-catalyzed reaction of phenylchalcogenate anion with bromoacetate)
IT 1666-13-3, Diphenyl diselenide **32294-60-3**, Diphenyl ditelluride
RL: RCT (Reactant); RACT (Reactant or reagent)
(condensation reaction of, with bromoacetic acid, phase transfer-catalyzed)
IT 72041-41-9P **116246-83-4P 127291-78-5P**
138100-77-3P 142753-40-0P 153490-06-3P
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation of)

L29 ANSWER 4 OF 10 HCAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 1992:59144 HCAPLUS
DOCUMENT NUMBER: 116:59144
TITLE: Novel preparation of highly electrophilic species for benzenetellurenylation or benzenesulfenylation by nitrobenzenesulfonyl peroxide in combination with ditelluride or disulfide. Application to intramolecular ring closures
AUTHOR(S): Yoshida, Masato; Suzuki, Takashi; Kamigata, Nobumasa
CORPORATE SOURCE: Fac. Sci., Tokyo Metrop. Univ., Hachioji, 192-03, Japan
SOURCE: Journal of Organic Chemistry (1992), 57(1), 383-6
CODEN: JOCEAH; ISSN: 0022-3263
DOCUMENT TYPE: Journal
LANGUAGE: English
OTHER SOURCE(S): CASREACT 116:59144
AB Electrophilic intramol. ring closures of unsatd. hydroxy or carboxy compds. were effected by nitrobenzenesulfonyl peroxide (I) in combination with PhTe2Ph (II) or PhS2Ph (III). Upon treatment with I, II was converted into an electrophilic species, which acted as an **initiator** for the cyclization of unsatd. alcs. to afford cyclic ethers. On the other hand, the electrophilic benzene sulfenyl species, similarly prepared from I and III could be used for phenylsulfolactonizations of unsatd. carboxylic acids.

IT **122823-57-8P**
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation of)
RN 122823-57-8 HCAPLUS
CN Benzofuran, 2,3-dihydro-2-[(phenyltelluro)methyl]- (9CI) (CA INDEX NAME)



IT **35684-37-8**
RL: RCT (Reactant); RACT (Reactant or reagent)
(reaction of, with nitrobenzenesufonyl peroxide)
RN 35684-37-8 HCAPLUS
CN Ditelluride, bis(4-methoxyphenyl) (9CI) (CA INDEX NAME)



IT **32294-60-3**, Diphenyl ditelluride
RL: RCT (Reactant); RACT (Reactant or reagent)
(reaction of, with nitrobenzenesulfonyl peroxide)
RN 32294-60-3 HCAPLUS
CN Ditelluride, diphenyl (CA INDEX NAME)

Ph— Te— Te— Ph

CC 27-13 (Heterocyclic Compounds (One Hetero Atom))
IT 108078-64-4P 108078-67-7P 113345-02-1P 122823-50-1P
122823-57-8P 137542-98-4P 137542-99-5P 137543-00-1P
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation of)
IT **35684-37-8**
RL: RCT (Reactant); RACT (Reactant or reagent)
(reaction of, with nitrobenzenesufonyl peroxide)
IT 882-33-7, Diphenyl disulfide **32294-60-3**, Diphenyl ditelluride
RL: RCT (Reactant); RACT (Reactant or reagent)
(reaction of, with nitrobenzenesulfonyl peroxide)

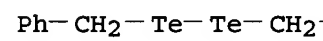
L29 ANSWER 5 OF 10 HCAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 1991:513992 HCAPLUS
DOCUMENT NUMBER: 115:113992
TITLE: Synthesis of alkali metal tellurides and ditellurides in THF and their relative reactivities towards alkyl bromides: a convenient synthesis of dialkyl tellurides and dialkyl ditellurides
AUTHOR(S): Bhasin, K. K.; Gupta, Vijay; Sharma, R. P.
CORPORATE SOURCE: Dep. Chem., Panjab Univ., Chandigarh, 160 014,

India
SOURCE: Indian Journal of Chemistry, Section A: Inorganic, Bio-inorganic, Physical, Theoretical & Analytical Chemistry (1991), 30A(7), 632-4
CODEN: ICACEC; ISSN: 0376-4710
DOCUMENT TYPE: Journal
LANGUAGE: English
OTHER SOURCE(S): CASREACT 115:113992

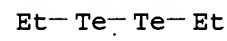
AB Lithium, sodium and potassium reduce smoothly elemental tellurium to telluride (Te2-) and ditelluride (Te22-) anions in THF in the presence of catalytic amts. of naphthalene. The relative reactivities of these alkali metal tellurides towards alkyl bromides have been investigated and a number of dialkyl tellurides, e.g., Bu2Te and dialkyl ditellurides were prepared in good to excellent yields.

IT **20727-11-1P 26105-63-5P 62654-03-9P**
77129-69-2P 131443-43-1P 135764-72-6P
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation of)

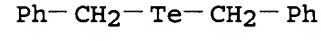
RN 20727-11-1 HCAPLUS
CN Ditelluride, bis(phenylmethyl) (CA INDEX NAME)



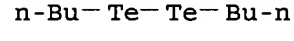
RN 26105-63-5 HCAPLUS
CN Ditelluride, diethyl (CA INDEX NAME)



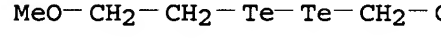
RN 62654-03-9 HCAPLUS
CN Benzene, 1,1'-[tellurobis(methylene)]bis- (9CI) (CA INDEX NAME)



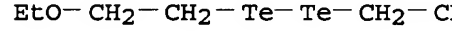
RN 77129-69-2 HCAPLUS
CN Ditelluride, dibutyl (CA INDEX NAME)



RN 131443-43-1 HCAPLUS
CN Ditelluride, bis(2-methoxyethyl) (9CI) (CA INDEX NAME)

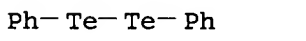


RN 135764-72-6 HCAPLUS
CN Ditelluride, bis(2-ethoxyethyl) (9CI) (CA INDEX NAME)

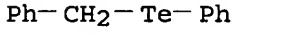


CC 23-13 (Aliphatic Compounds)
Section cross-reference(s): 78
IT 91-20-3, Naphthalene, uses and miscellaneous
RL: CAT (Catalyst use); USES (Uses)
(**catalysts**, for reaction of tellurium with alkali metals)
IT 627-54-3P **20727-11-1P 26105-63-5P** 38788-38-4P
62654-03-9P 77129-69-2P 131443-42-0P
131443-43-1P 135764-71-5P **135764-72-6P**
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation of)

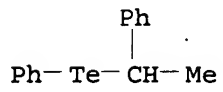
L29 ANSWER 6 OF 10 HCAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 1989:423137 HCAPLUS
DOCUMENT NUMBER: 111:23137
TITLE: Catalytic oxidation of olefins using diphenyl ditelluride
AUTHOR(S): Kambe, Nobuaki; Fujioka, Toyozo; Ogawa, Akiya; Miyoshi, Noritaka; Sonoda, Noboru
CORPORATE SOURCE: Fac. Eng., Osaka Univ., Suita, 565, Japan
SOURCE: Phosphorus and Sulfur and the Related Elements (1988), Volume Date 1987, 38(1-2), 167-75
CODEN: PREEDF; ISSN: 0308-664X
DOCUMENT TYPE: Journal
LANGUAGE: English
OTHER SOURCE(S): CASREACT 111:23137
AB Reaction of aliphatic alkenes (e.g., 1-octene) with Me3COOH and PhTeTePh in MeOH containing H2SO4 gave methoxytellurenylation products [e.g., H(CH2)6CH(OMe)CH2TePh] regioselectively. Cyclohexene gave only trans-1-methoxy-2-(phenyltelluro)cyclohexane. Under similar conditions, aromatic alkenes (e.g., p-MeC6H4CH:CH2) gave dimethoxy derivs. [e.g., p-MeC6H4CH(OMe)CH2OMe]. Other oxidants (O, H2O2, m-ClC6H4CO2OH) were also effective. The mechanism is discussed.
IT **32294-60-3**, Diphenyl ditelluride
RL: CAT (Catalyst use); USES (Uses)
(**catalyst**, for oxidation of alkenes with Bu hydroperoxide-methanol)
RN 32294-60-3 HCAPLUS
CN Ditelluride, diphenyl (CA INDEX NAME)



IT **32344-00-6P 121335-32-8P**
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(preparation and methoxylation of)
RN 32344-00-6 HCAPLUS
CN Benzene, [(phenylmethyl)telluro]- (CA INDEX NAME)

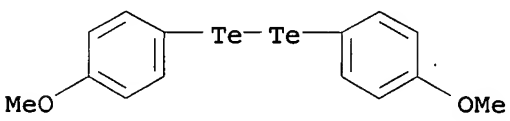


RN 121335-32-8 HCAPLUS
CN Benzene, [(1-phenylethyl)telluro]- (CA INDEX NAME)

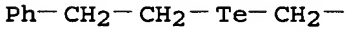


CC 25-9 (Benzene, Its Derivatives, and Condensed Benzenoid Compounds)
ST alkene aliph methoxytellurenylation regiochem; arom alkene methoxylation ditelluride **catalyst**; phenyltelluroalkane methoxy; oxidn arylalkene hydroperoxide methanol
IT Methoxylation **catalysts**
(di-Ph ditelluride, for aromatic alkenes with Bu hydroperoxide-methanol)
IT **32294-60-3**, Diphenyl ditelluride
RL: CAT (Catalyst use); USES (Uses)
(**catalyst**, for oxidation of alkenes with Bu hydroperoxide-methanol)
IT **32344-00-6P 121335-32-8P**
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(preparation and methoxylation of)

L29 ANSWER 7 OF 10 HCAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 1989:406962 HCAPLUS
DOCUMENT NUMBER: 111:6962
TITLE: A new and efficient reaction for the synthesis of the carbon-carbon bond
AUTHOR(S): Barton, Derek H. R.; Ozbalik, Nubar; Ramesh, Manian
CORPORATE SOURCE: Dep. Chem., Texas A and M Univ., College Station, TX, 77843, USA
SOURCE: Tetrahedron Letters (1988), 29(29), 3533-6
CODEN: TELEAY; ISSN: 0040-4039
DOCUMENT TYPE: Journal
LANGUAGE: English
OTHER SOURCE(S): CASREACT 111:6962
AB Sym. and unsym. tellurides R1TeR2 (R1 = anisyl, PLCH2CH2; R2 = anisyl, PhCH2CH2, PhCH2, 1-adamantyl, C15H31) were treated with Pd in MeCN to give the resp. R1R2; cross-coupling was not observed Similarly, dianisyl ditelliride was converted to MeOC6H4C6H4OMe.
IT **35684-37-8 119784-58-6**, Benzyl phenethyl telluride
RL: RCT (Reactant); RACT (Reactant or reagent)
(demetalation of, **catalysts** for)
RN 35684-37-8 HCAPLUS
CN Ditelluride, bis(4-methoxyphenyl) (9CI) (CA INDEX NAME)

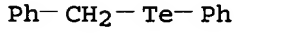


RN 119784-58-6 HCAPLUS
CN Benzene, [[(2-phenylethyl)telluro]methyl]- (9CI) (CA INDEX NAME)



CC 25-2 (Benzene, Its Derivatives, and Condensed Benzenoid Compounds)
Section cross-reference(s): 23, 24, 29
ST demetalation aryl telluride **catalyst**; biphenyl; alkyl telluride demetalation **catalyst**; adamantyl telluride demetalation **catalyst**
IT Tellurides
RL: RCT (Reactant); RACT (Reactant or reagent)
(demetalation of, **catalysts** for)
IT Substitution reaction **catalysts**
(tellurylation, retro, palladium, for aryl and arylalkyl tellurides)
IT 7440-05-3, Palladium, uses and miscellaneous
RL: CAT (Catalyst use); USES (Uses)
(**catalysts**, for demetalation of aryl and arylalkyl tellurides)
IT 4456-34-2 **35684-37-8** 71766-40-0, Diphenethyl telluride
95177-44-9 **119784-58-6**, Benzyl phenethyl telluride
119784-59-7
RL: RCT (Reactant); RACT (Reactant or reagent)
(demetalation of, **catalysts** for)

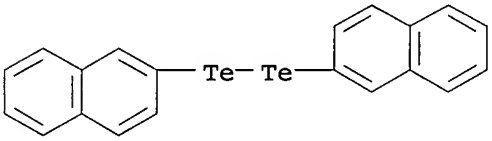
L29 ANSWER 8 OF 10 HCAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 1985:184440 HCAPLUS
DOCUMENT NUMBER: 102:184440
TITLE: Organotelluriums. V. Nucleophilic cleavages of esters and ethers with phenyltellurotrimethylsilane
AUTHOR(S): Sasaki, Kazuaki; Aso, Yoshio; Otsubo, Tetsuo; Ogura, Fumio
CORPORATE SOURCE: Fac. Eng., Hiroshima Univ., Higashi-Hiroshima, 724, Japan
SOURCE: Tetrahedron Letters (1985), 26(4), 453-6
CODEN: TELEAY; ISSN: 0040-4039
DOCUMENT TYPE: Journal
LANGUAGE: English
OTHER SOURCE(S): CASREACT 102:184440
AB Treatment of esters and ethers with PhTeSiMe3 in the presence of ZnI2 **catalyst** under very mild conditions gave C-telluration and O-silylation products via nucleophilic cleavages of the C-O bonds. Thus, cleavage of butyrolactone gave PhTe(CH2)3CO2H and that of methyloxirirane gave PhTeCH2CHMeOSiMe3.
IT **32344-00-6P**
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation of)
RN 32344-00-6 HCAPLUS
CN Benzene, [(phenylmethyl)telluro]- (CA INDEX NAME)



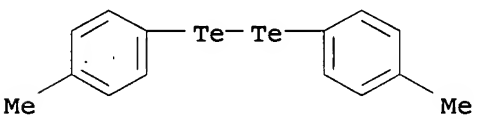
IT **32294-60-3**
RL: RCT (Reactant); RACT (Reactant or reagent)
(reaction of, with sodium and trimethylsilyl chloride)
RN 32294-60-3 HCAPLUS
CN Ditelluride, diphenyl (CA INDEX NAME)

CC 21-2 (General Organic Chemistry)
IT 872-89-9P 1529-17-5P 1825-61-2P 6221-88-1P 14642-79-6P
32343-98-9P **32344-00-6P** 91489-38-2P 96185-49-8P
96185-50-1P 96185-51-2P 96185-52-3P 96185-53-4P 96185-54-5P
96185-55-6P 96185-56-7P 96185-57-8P 96185-58-9P 96206-05-2P
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation of)
IT **32294-60-3**
RL: RCT (Reactant); RACT (Reactant or reagent)
(reaction of, with sodium and trimethylsilyl chloride)

L29 ANSWER 9 OF 10 HCAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 1985:166398 HCAPLUS
DOCUMENT NUMBER: 102:166398
TITLE: Alkaline hydrolysis of diaryl ditellurides under phase transfer conditions; synthesis of alkyl aryl tellurides
AUTHOR(S): Comasseto, J. V.; Ferreira, J. T. B.; Val, J. A. Fontanillas
CORPORATE SOURCE: Inst. Quim., Univ. Sao Paulo, Sao Paulo, Brazil
SOURCE: Journal of Organometallic Chemistry (1984), 277(2), 261-6
CODEN: JORCAI; ISSN: 0022-328X
DOCUMENT TYPE: Journal
LANGUAGE: English
OTHER SOURCE(S): CASREACT 102:166398
AB The disproportionation reaction of RTeTeR (R = Ph, 4-MeC6H4, 4-MeOC6H4, 4-EtOC6H4, 2-naphthyl) with NaOH under phase transfer conditions at room temperature is carried out with 2HT-75, a mixture of dialkyldimethylammonium chlorides. The intermediates aryl tellurolates react in situ with alkyl halides to give 52-72% alkyl aryl tellurides RTeR1 (R1 = Bu, CH2CH2CHMe2, CH2CHMe2, CH2CH2CHMeBr, decyl, CH2Ph, CH2Cl, CH2CH2Ph, allyl, CH2CH:CHPh, CH2SePh, 2-cyclohexen-1-yl).
IT **1666-12-2 32294-57-8 32294-60-3**
35684-37-8 35684-38-9
RL: RCT (Reactant); RACT (Reactant or reagent)
(disproportionation reactions of, phase transfer catalysis in)
RN 1666-12-2 HCAPLUS
CN Ditelluride, di-2-naphthalenyl (CA INDEX NAME)



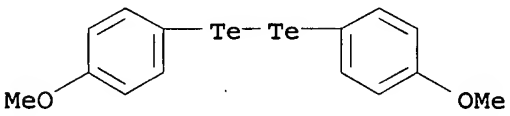
RN 32294-57-8 HCAPLUS
CN Ditelluride, bis(4-methylphenyl) (CA INDEX NAME)



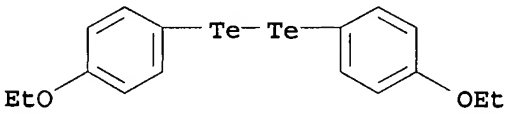
RN 32294-60-3 HCAPLUS
CN Ditelluride, diphenyl (CA INDEX NAME)

Ph—Te—Te—Ph

RN 35684-37-8 HCAPLUS
CN Ditelluride, bis(4-methoxyphenyl) (9CI) (CA INDEX NAME)



RN 35684-38-9 HCAPLUS
CN Ditelluride, bis(4-ethoxyphenyl) (9CI) (CA INDEX NAME)



IT **32344-00-6P**
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation of)
RN 32344-00-6 HCAPLUS
CN Benzene, [(phenylmethyl)telluro]- (CA INDEX NAME)

Ph—CH_2—Te—Ph

CC 25-14 (Benzene, Its Derivatives, and Condensed Benzenoid Compounds)
IT Disproportionation **catalysts**
(phase-transfer, for diarylditellurides)
IT **1666-12-2 32294-57-8 32294-60-3**
35684-37-8 35684-38-9
RL: RCT (Reactant); RACT (Reactant or reagent)
(disproportionation reactions of, phase transfer catalysis in)
IT 32343-98-9P **32344-00-6P** 55136-86-2P 55136-87-3P
56950-02-8P 81609-30-5P 83817-36-1P 87550-08-1P 95849-63-1P
95849-64-2P 95849-65-3P 95849-66-4P 95849-67-5P 95849-68-6P
95849-69-7P 95849-70-0P
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation of)

L29 ANSWER 10 OF 10 HCAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 1979:532159 HCAPLUS
DOCUMENT NUMBER: 91:132159
TITLE: Organotellurium (II) and (IV) compounds in heat-developable imaging materials and process with physically-developable nuclei
INVENTOR(S): Lelental, Mark; Gysling, Henry J.
PATENT ASSIGNEE(S): Eastman Kodak Co., USA
SOURCE: U.S., 12 pp.

CODEN: USXXAM
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 3
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 4152155	A	19790501	US 1977-848063	197711 03
CA 1081949	A1	19800722	CA 1976-259885	197608 26
FR 2357932	A1	19780203	FR 1977-20874	197707 07
FR 2357932	B1	19790427		
JP 53007226	A	19780123	JP 1977-81119	197707 08
GB 1580073	A	19801126	GB 1977-28794	197707 08
US 4144062	A	19790313	US 1977-848062	197711 03
PRIORITY APPLN. INFO.:			US 1976-703477 A2	197607 08

AB An imaging composition containing a Te(II) or Te(IV) compound as an oxidizing agent and a reducing agent is described. The composition, which is especially useful in heat-developable materials containing sources of phys. developable nuclei, provides an improved amplified image by heating the element to moderately elevated temps. Thus, a paper support was coated at 9 mils (wet) with a solution prepared by mixing a 10% solution of 2-hydroxy-5-methyl-3-piperidino-2-cyclopentenone in Me2CO-PhMe-DMF (45:45:10) 2 mL and a 2% solution of poly(vinyl butyral) 10 mL containing Te[S2CN(Et2]2 40 mg. The resulting heat-developable material was then laminated in face-to-face contact with a step tablet distribution of Ag nuclei, vapor deposited on a poly(ethylene terephthalate) film support. The resulting so-called sandwich was then passed between heated rollers at 175° to provide heating at this temperature for 15 s. This produced dark Te deposits of neutral (black) tone in the areas in which the Ag nuclei and the layer containing the Te complex were adjacent.

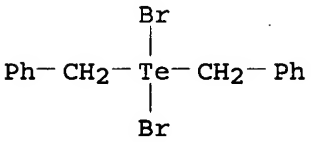
IT **32294-60-3 62654-04-0**
RL: USES (Uses)
(photosensitive compns. containing, for heat-developable photoimaging materials for use with phys. developable nuclei)

RN 32294-60-3 HCAPLUS
CN Ditelluride, diphenyl (CA INDEX NAME)

Ph—Te—Te—Ph

RN 62654-04-0 HCAPLUS

CN Tellurium, dibromobis(phenylmethyl)-, (T-4)- (9CI) (CA INDEX NAME)



IC G03C005-24; G03C001-76; G03C001-00; G03C001-02
INCL 096048000PD
CC 74-8 (Radiation Chemistry, Photochemistry, and Photographic Processes)
IT 7440-05-3, uses and miscellaneous 7440-22-4, uses and miscellaneous 7440-50-8, uses and miscellaneous 7440-57-5, uses and miscellaneous
RL: CAT (Catalyst use); USES (Uses)
(**catalysts**, for use with photosensitive photoimaging compns. containing organotellurium compound)
IT 50-81-7, uses and miscellaneous 92-43-3 119-47-1 837-13-8 1838-13-7 1948-33-0 2049-55-0 2654-58-2 5471-90-9 5930-28-9 6112-49-8 13047-13-7 15080-52-1 **32294-60-3** 41756-91-6 51767-45-4 **62654-04-0** 66083-69-0 66084-81-9 66084-84-2 66101-97-1 71210-34-9
RL: USES (Uses)
(photosensitive compns. containing, for heat-developable photoimaging materials for use with phys. developable nuclei)

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